

REMARKS

This is a full and timely response to the outstanding Office action mailed May 20, 2005. Upon entry of the amendments in this response claims 18-49 are pending. More specifically, claims 18, 31, and 35 are amended. These amendments are specifically described hereinafter. It is believed that the foregoing amendments add no new matter to the present application.

I. Present Status of Patent Application

Claims 18-49 are rejected under 35 U.S.C. §112, second paragraph, as allegedly being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claims 18-19 and 34-36 are rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Rao (U.S. Patent No. 5,506,844) in view of Auyeung *et al.* (U.S. Patent No. 5,677,969).

II. Rejections Under 35 U.S.C. §103(a)

A. Claims 18-19 and 34

The Office Action rejects claims 18-19 and 34 under 35 U.S.C. §103(a) as allegedly being unpatentable over *Rao* (U.S. Patent No. 5,506,844) in view of *Auyeung* (U.S. Patent No. 5,677,969). For the reasons set forth below, Applicants respectfully traverse the rejection.

Independent claim 18 recites:

18. A multiplexer for multiplexing a plurality of variable-rate bit streams onto a medium, the multiplexer comprising:
- a receiver for receiving the bit streams;
 - a transmitter coupled to the receiver for transmitting the bit streams on the medium, each bit stream receiving a dynamically-variable portion of the bandwidth of the medium; and
 - a bandwidth portion controller coupled between the transmitter and the receiver for dynamically determining the variable portion for each bit stream using an output rate

that is obtained by ***applying a Motion Pictures Expert Group 2 Video Buffer Verifier (VBV) model of a receiver for the bit stream to information read from the bit stream.***

For a proper rejection of a claim under 35 U.S.C. §103, the cited combination of references must disclose, teach, or suggest all elements/features/steps of the claim at issue. *See, e.g., In re Dow Chemical.*, 5 U.S.P.Q.2d 1529, 1531 (Fed. Cir. 1988) and *In re Keller*, 208 U.S.P.Q.2d 871, 881 (C.C.P.A. 1981). Applicant respectfully submits that independent claim 18 is allowable for at least the reason that neither *Rao* nor *Auyeung* disclose, teach, or suggest at least ***applying a Motion Pictures Expert Group 2 Video Buffer Verifier (VBV) model of a receiver for the bit stream to information read from the bit stream.*** The model in *Auyeung* is not defined by the MPEG2 standard. Conversely, the model in *Auyeung* is based on received data from an encoder. “First, a plurality of quantized video bits is received from an encoder. The plurality of quantized video bits correspond to a video frame type. Then, a virtual buffer is created, in a rate controller, to model fullness of a decoder buffer, based on the [received] quantized video bits, to produce a virtual buffer fullness.” *Auyeung*, col. 2, lines 46-55. *Rao* does not overcome this deficiency.

As shown above, the cited combination of references does not disclose, teach, or suggest, either implicitly or explicitly, all the elements of claim 18. Notwithstanding, no such teaching can be identified anywhere within these references. Therefore, the rejection should be withdrawn. Additionally and notwithstanding the analysis hereinabove, there are other reasons why claim 18 is allowable.

Because independent claim 18 is allowable over the cited art of record, dependent claims 18-19 and 34 (which depend from independent claim 18) are allowable as a matter of law for at least the reason that dependent claims 18-19 and 34 contain all the steps/features of independent claim 18. *See Minnesota Mining and Manufacturing Co. v. Chemque, Inc.*, 303 F.3d 1294, 1299 (Fed. Cir. 2002) *Jeneric/Pentron, Inc. v. Dillon Co.*, 205 F.3d 1377, 54 U.S.P.Q.2d 1086 (Fed. Cir. 2000); *Wahpeton Canvas Co. v. Frontier Inc.*, 870 F.2d 1546, 10 U.S.P.Q.2d 1201 (Fed. Cir. 1989). Therefore, the rejection to claims 18-19 and 34 should be withdrawn and the claims allowed.

Additionally and notwithstanding the foregoing reasons for allowability of independent claim 18, dependent claims 18-19 and 34 recite further features and/or combinations of features, as are apparent by examination of the claims themselves, that are patently distinct from the cited art of record. Hence there are other reasons why dependent claims 18-19 and 34 are allowable.

B. Claims 35-36

The Office Action rejects claims 35-36 under 35 U.S.C. §103(a) as allegedly being unpatentable over *Rao* (U.S. Patent No. 5,506,844) in view of *Auyeung* (U.S. Patent No. 5,677,969). For the reasons set forth below, Applicant respectfully traverses the rejection.

Independent claim 35 recites:

35. A method of multiplexing a plurality of variable-rate bit streams onto a medium, the method comprising the steps of:

- receiving the bit streams;
- for each bit stream, dynamically obtaining an output rate by ***applying a Motion Pictures Expert Group 2 Video Buffer Verifier (VBV) model of a receiver for the bit stream to information read from the bit stream***;
- for each bit stream, using the output rate determined for the bit stream to dynamically determine a variable portion of the bandwidth of the medium; and
- for each bit stream, outputting the bit stream to the medium using the bit stream's variable portion of the bandwidth.

For a proper rejection of a claim under 35 U.S.C. §103, the cited combination of references must disclose, teach, or suggest all elements/features/steps of the claim at issue. *See, e.g., In re Dow Chemical.*, 5 U.S.P.Q.2d 1529, 1531 (Fed. Cir. 1988) and *In re Keller*, 208 U.S.P.Q.2d 871, 881 (C.C.P.A. 1981). Applicant respectfully submits that independent claim 35 is allowable for at least the reason that neither *Rao* nor *Auyeung* disclose, teach, or suggest at least **applying a Motion Pictures Expert Group 2 Video Buffer Verifier (VBV) model of a receiver for the bit stream to information read from the bit stream**. The model in *Auyeung* is not defined by

the MPEG2 standard. Conversely, the model in *Auyeung* is based on received data from an encoder. “First, a plurality of quantized video bits is received from an encoder. The plurality of quantized video bits correspond to a video frame type. Then, a virtual buffer is created, in a rate controller, to model fullness of a decoder buffer, based on the [received] quantized video bits, to produce a virtual buffer fullness.” *Auyeung*, col. 2, lines 46-55. *Rao* does not overcome this deficiency.

As shown above, the cited combination of references does not disclose, teach, or suggest, either implicitly or explicitly, all the elements of claim 35. Notwithstanding, no such teaching can be identified anywhere within these references. Therefore, the rejection should be withdrawn. Additionally and notwithstanding the analysis hereinabove, there are other reasons why claim 35 is allowable.

Because independent claim 35 is allowable over the cited art of record, dependent claim 36 (which depends from independent claim 35) is allowable as a matter of law for at least the reason that dependent claim 36 contains all the steps/features of independent claim 35. *See Minnesota Mining and Manufacturing Co. v. Chemque, Inc.*, 303 F.3d 1294, 1299 (Fed. Cir. 2002) *Jeneric/Pentron, Inc. v. Dillon Co.*, 205 F.3d 1377, 54 U.S.P.Q.2d 1086 (Fed. Cir. 2000); *Wahpeton Canvas Co. v. Frontier Inc.*, 870 F.2d 1546, 10 U.S.P.Q.2d 1201 (Fed. Cir. 1989). Therefore, the rejection to claim 36 should be withdrawn and the claim allowed.

Additionally and notwithstanding the foregoing reasons for allowability of independent claim 35, dependent claim 36 recites further features and/or combinations of features, as are apparent by examination of the claims themselves, that are patently distinct from the cited art of record. Hence there are other reasons why dependent claim 36 is allowable.

V. Miscellaneous Issues

Regarding the rejections under 35 U.S.C. §112, the allegedly indefinite language has been removed, overcoming the rejection and making those claims allowable.

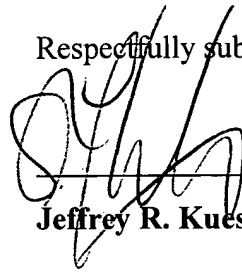
Any other statements in the Office Action that are not explicitly addressed herein are not intended to be admitted. In addition, any and all findings of inherency are traversed as not having been shown to be necessarily present. Furthermore, any and all findings of well-known

art and official notice, or statements interpreted similarly, should not be considered well known since the Office Action does not include specific factual findings predicated on sound technical and scientific reasoning to support such conclusions.

CONCLUSION

In light of the foregoing amendments and for at least the reasons set forth above, Applicant respectfully submits that all objections and/or rejections have been traversed, rendered moot, and/or accommodated, and that the now pending claims 18-49 are in condition for allowance. Favorable reconsideration and allowance of the present application and all pending claims are hereby courteously requested. If, in the opinion of the Examiner, a telephonic conference would expedite the examination of this matter, the Examiner is invited to call the undersigned agent at (770) 933-9500.

Respectfully submitted,



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